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APPLICATION FOR LETTERS PATENT

for

SPILL RESISTANT LID

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FIELD OF THE INVENTION

This invention relates in general to container lids, and in particular to spill resistant lids for all types of containers.

BACKGROUND OF THE INVENTION

With the increasing pace of today's world, consumers are often purchasing beverages designed to be taken "on-the-go." Every day consumers walk, run, drive, and even cycle, while transporting their beverages in disposable, or non-disposable, containers. Often these beverages are high in temperature, such as coffee, tea or cocoa. Even the most cautious consumers are faced with the possibility of spilling their beverages as they journey to work, home, or other locations. Container lids have been affixed to beverage containers in an attempt to prevent spills, and facilitate the enjoyment of various beverages during transportation.

Various styles of container lids are known in the art. These prior art lids are generally disposable, and are normally designed to work in conjunction with disposable containers. One such container is a disposable drinking cup, of the kind used for beverages such as coffee, carbonated beverages and other consumable liquids.

One style of disposable lid comprises a plastic lid having a tab that may be peeled backward to produce an opening through which the beverage may be dispensed. This type of lid often includes a locking area on the top of the lid, wherein the tab may be locked in the open position. The drawbacks of such a lid are that once peeled back, the tab does not always lock properly. The tab often impedes the user who is trying to consume the beverage. Additionally, the entire lid may be accidentally removed while the tab is being peeled back. The beverage may also leak around the edges of the

opening, spilling the beverage along the outside of the container, or spilling the beverage directly onto the consumer. Further, upon peeling back the tab, the beverage is not impeded from spilling out of the opened portion of the lid. Once the tab is peeled back, it can no longer be secured to the rim of the container. Consumers will often remove the lid entirely, leaving a completely open container that is highly susceptible of spilling.

Another prior art lid includes a pre-fabricated opening in the lid. This type of lid often includes raised sidewalls, whereby a dome-like feature is achieved. The consumer drinks the beverage through the pre-fabricated opening. A drawback of this type of dome-lid is that the consumer must drink the beverage through a single oval shaped opening. Drinking a beverage through this opening is not a natural feeling, and is often unpleasant for the consumer. This type of lid also normally includes no spill-resistant features at all.

A drawback common to both of these styles of lids can be found when considering container orientation with respect to the consumer. If the container, and accompanying lid opening, is not aligned properly with the consumer's mouth, a spill will likely occur when the consumer attempts to drink the beverage.

This drawback is clearly illustrated whenever a container having one of the aforementioned prior art lids is set down. If the consumer is sitting at a table, setting the beverage down and finding the appropriate alignment at a later time poses no monumental task. However, if the consumer sets the container down within a beverage holder in an automobile, it is almost impossible for the vehicle's operator to safely drive while simultaneously keeping track of the container's orientation. The consumer is forced to continuously look down and check the container's orientation, or as an

alternative, many vehicle operators will hold the container rather than be encumbered with maintaining the proper container orientation. The obvious result is a vehicle operator driving with only one free hand. Bumpy roads, sudden stops, and other adverse driving conditions also offer numerous opportunities for these prior art lids to leak and/or spill.

Accordingly, what is desired is a container lid that offers spill resistance, and requires little, or no, consumer action. Further, what is desired is a lid that combines spill resistance with the feeling that the consumer is consuming a beverage directly from a container that has no lid at all. Additionally, a lid is desired that renders the orientation of the container irrelevant to the consumer.

SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a spill-resistant container lid that requires no action on the part of the consumer.

It is also an object of the present invention to provide a spill-resistant lid that will provide the consumer with the feeling that a normal, open drinking cup is being utilized.

Additionally, it is an object of the present invention to provide a spill-resistant lid that renders the orientation of the container irrelevant.

The present invention comprises a container lid that may be employed with a disposable, or non-disposable container. The lid includes dispensing cavities through which a beverage within the container may be dispensed. A venting cavity is also included to provide free-flow of the liquid.

The preferred embodiment of the present invention comprises a lid that includes an attachment means for attaching the lid to the rim of a container. The container may

comprise a common drinking cup. The attachment means may comprise a downward oriented annular channel, as is known in the art. The attachment means may also comprise an outer circumference that is slightly larger than the container opening, and may also include a ridge located on the inner portion of the outer circumference, similar to the attachment means known in art and utilized on various dome-style lids. Other suitable attachment means may be used, as are currently known in the art, and known to those of ordinary skill in the art.

A preferred embodiment includes sidewalls that extend downwardly into the container, from which a liquid shield depends. In a preferred embodiment, the liquid shield includes at least one dispensing cavity and at least one venting cavity. These cavities may be drilled, punched, or created in any suitable manner, as is known in the art. The cavities may be substantially circular, or other shapes, designed to assist the free-flow of the beverage or other substance located within the container. The cavities may also resemble a substantially circular opening that is connected by a slit to a smaller substantially circular opening located within the inner portion of the liquid shield.

As the beverage pours from the at least one dispensing cavity or plurality of dispensing cavities, in conjunction with the length of the downward extending sidewalls, the consumer only comes in contact with the outer area of the attachment means portion of the lid. The overall result achieved is the impression that the consumer is drinking from the normal, open portion of a drinking cup; that is, the overall impression is one of drinking from a container that has no lid at all.

In another embodiment of the invention, the container lid may include a lid cover that is designed to render the spill-resistant lid spill-proof. The lid cover includes

extensions that alternatively cover, or reveal, the dispensing and venting cavities when the lid cover is rotated. The exact shape and design of the lid cover will be dependent on the number of cavities employed in the liquid shield. In a preferred embodiment the dispensing and venting cavities symmetrically encircle the outer portion of the liquid shield, forming a complete ring. Accordingly, the lid cover may slightly resemble the profile of gear with the extensions resembling the individual gear teeth. The extensions may be of any shape, provided that they do not interfere with the free rotation of the lid cover. The extensions will also be of sufficient shape so that when rotated and aligned with the dispensing and venting cavities, the cavities are covered. This results in a spill-proof, or closed position.

The lid cover may be attached to the liquid shield via any means as is common in the art, such as a central pin-assembly, or an outer retainment ring. In a preferred embodiment the lid cover is secured with sufficient friction to allow free movement only when sufficient rotational force is applied by the user. The lid cover may be attached to the liquid shield top, or to the liquid shield bottom, and may include a tab, or other raised portion to assist in rotating the lid cover, or the lid cover may include cut-outs to assist in rotating the cover. The liquid shield and lid cover may include means for allowing the user to be aware of the alignment of the extensions in relation to the cavities, such as a rotation stop, and may include means for temporarily fixing the lid cover in either a closed or open position.

In another preferred embodiment, the container lid includes a lid cap that may be releasable attachable to the lid, whereby a second spill-proof layer is added. The lid cap may be used in conjunction and combination with any of the container lid embodiments.

The lid cap provides increased sanitation, and temperature control of a beverage, as necessary. The lid cap may comprise a thin, clear plastic lid cap, as is known in the art. The lid cap may be substantially flat, or may include downward extending sidewalls that substantially follow the lid cover sidewalls. The lid cap is easily removable and attachable, and may include an attachment means similar to the downward facing annular channel utilized by an embodiment of the container lid attachment means, or any other attachment means as is known in the art.

In another embodiment, the container lid includes instructions, messages, advertisements, warnings or other designs. For example, the liquid shield may contain a message that the beverage is hot, or the lid cover may contain instructions for rotating the lid cover. Additionally, the lid may contain words indicating the type of beverage within the container. The messages may be imprinted or raised directly from the lid, or applied via ink, paint, stickers, or other means. The locations for and types of messages noted above merely serve as examples, and should not be seen as limitations of the present invention.

In another embodiment of the present invention, the container lid is sufficiently shaped to allow for stacking of the container lids, which will allow for ease of transportation and storage of quantities of container lids, wherein a minimum of space is utilized by a stack, or stacks, of container lids.

In another embodiment of the present invention, the container lids may be sufficiently shaped to allow for releasable attachment on either disposable, or nondisposable, containers. Additionally, said containers may be substantially cylindrical or non-cylindrical in nature. Container, as used herein, may refer to a beverage container,

such as cups, mugs, steins and glasses; or other types of containers, such as pots or pans. Those skilled in the art will recognize that the benefits of spill-proofing a variety of containers may be achieved by the disclosed invention.

Other objects and advantages of the present invention will be recognized when the following description is considered along with the drawings.

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWING

FIG. 1 is an inferior view of a spill-resistant lid.

FIG. 2 is an exploded view of the spill-resistant lid including the lid, cover and lid cap.

FIG. 3 is a top plan view of the lid in an open position.

FIG. 4 is a top plan view of the lid in a closed position.

FIG. 5 is a perspective view of the lid displaying an alternative embodiment for the cavities.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, **FIG. 1** is an inferior view of container lid **1** displaying a plurality of dispensing cavities **2**, and a plurality of venting cavities **10**, encircling the outer portion of the liquid shield **3** in a substantially symmetrical fashion. **FIG. 2** is an exploded view of container lid **1**, including a cut-away view of lid cap **4**, lid cover **5**, rotation means **6** and a plurality of dispensing cavities **2**, and a plurality of venting cavities **10**. Liquid shield **3** is displayed depending from sidewall **11**. Extensions **7** are also illustrated as part of lid cover **5**. **FIG. 3** illustrates container lid **1** and lid cover **5**, wherein lid cover **5** and corresponding extensions **7** are rotatably aligned in an open position. **FIG. 4** displays the same view, with the exception that lid cover **5** has been

positioned so that the alignment of extensions **7** and a plurality of dispensing cavities **2**, and a plurality of venting cavities **10** are such that container lid **1** is in a closed position. **FIG. 5** is a perspective view displaying an alternative embodiment of container lid **1**, wherein plurality of dispensing cavities **2**, and plurality of venting cavities **10** further comprise a slit **8** extending toward the center of liquid shield **3**, and end in a smaller substantially circular cavity **9**.

It will be apparent to those skilled in the art that invention may be practiced in a variety of ways, including a number of styles and materials, and in conjunction with a variety of types of containers, both disposable and non-disposable, without departing from the spirit and the scope of the claimed invention. Accordingly, the preceding descriptions are meant to illustrate, rather than limit the scope invention.